



AMENDMENT UNDER 37 C.F.R. § 1.116
EXPEDITED PROCEDURE
GROUP 2834
PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of

Yoshihito ASAO

Appln. No.: 09/277,198

Confirmation No.: Not Yet Assigned

Group Art Unit: 2834

Filed: March 26, 1999

Examiner: K. Tamai

For: STATOR FOR AN AUTOMOTIVE ALTERNATOR AND METHOD OF
MANUFACTURE THEREFOR

#15/Beg. for
Reconsid.
Hawkins
7/12/01

REQUEST FOR RECONSIDERATION UNDER 37 C.F.R. § 1.116

ATTN: BOX AF
Commissioner for Patents
Washington, D.C. 20231

Sir:

In response to the Office Action dated March 7, 2001, please amend the above-identified application as follows:

In response to the Office Action dated March 7, 2001 Applicant respectfully requests reconsideration of the Examiner's rejection for the reasons set forth in the following remarks:

REMARKS

Claims 1-15 are all the claims that have been examined in the application.

Reconsideration and allowance of all claims are respectfully requested in view of the following remarks.

REQUEST FOR RECONSIDERATION
U.S. Appln. No. 09/277,198

Rejections Under 35 U.S.C. § 103

Claims 1-4 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Adachi (Japanese Patent Publication No. JP 9-103052, “Adachi”) in view of Glennon et al. (USP, 4,598,233 “Glennon”). This rejection is respectfully traversed as follows.

Applicant’s claimed invention clearly defines over Adachi in view of Glennon, because Adachi in combination with Glennon does not disclose, teach or suggest Applicant’s claimed stator for an automotive alternator, as set out in Applicant’s previous Amendment of December 12, 2000. The Examiner maintains the assertion that it would have been obvious to one skilled in the art to modify the structure of Adachi in view of Glennon to produce Applicant’s claimed stator structure. Applicant respectfully submits that the Examiner has misconstrued the proposed reference combination and/or Applicant’s arguments in favor of patentability.

With respect to claim 1, the Examiner acknowledges that the Adachi reference alone does not disclose a preformed stator coil having inner circumferential bridge portions in contact with axial end surfaces of the stator core so that there are no significant gaps therebetween. The Examiner relies on the Glennon reference to teach this feature (circumferential bridge portions in contact with axial end surfaces of the stator core so that there are no significant gaps therebetween), which the Examiner acknowledges does not specifically apply to preformed stator coil assemblies. The Examiner asserts that Glennon teaches “shortening of the stator assembly by bringing the end-turns of the coil into contact with the stator core,” and that the proposed Adachi-Glennon combination teaches “one of ordinary skill in the art to form a pre-formed coil such that the gaps provided between the axially arranged elements was minimized.” However, neither Adachi or Glennon, alone or in combination with one another teach such a coil.

REQUEST FOR RECONSIDERATION
U.S. Appln. No. 09/277,198

As set out in Applicant's previous amendments including the December 12, 2000 Amendment, Adachi does not disclose, teach or suggest a stator coil with bridge portions in contact with axial end surfaces of the stator core with no significant gaps therebetween. While Glennon discloses "end-turns" with "no appreciable extension axially," Glennon is not properly combinable with Adachi and even if so combined would not accomplish Applicant's claimed invention.

As set out in Applicant's previous Amendment of December 12, 2000, and acknowledged by the Examiner, Glennon's end-turns are not part of a preformed coil as required by Applicant's claim 1. Glennon clearly teaches end-turn connections 58 with curved portions 60 and 62 that are brazed or similarly connected to the ends (54, 56) of conductors 52 through jogs 68. *See* col. 4, lines 8-25 of Glennon. Moreover rectangular conductors 52 and "z-shaped" end-turns 58 do not even represent parts of a "coil," and are not "wound" as is known in the art. These distinctions notwithstanding, it is abundantly clear that Glennon teaches a multi-part conductor "winding" assembly that is clearly assembled after Glennon's conductors 52 are assembled within slots 50 of stator armature body 12, and end turns 58 are then connected to ends 54/56 of conductors 52. *See* col. 3, line 62 - col. 4, line 25 of Glennon.

Such multi-part/post core insertion connected coils are clearly distinguishable from Applicant's limitation in claim 1 of "a preformed stator coil." Further, as set forth in Applicant's Amendment of December 12, 2000, while individually wound coils or multi-part/post core insertion connected coils (or in this case end-turn connections) can produce a coil assembly assembled to a stator core with no appreciable axial gaps, these individually wound/post-

REQUEST FOR RECONSIDERATION
U.S. Appln. No. 09/277,198

connected coils also dramatically decrease the efficiency of stator manufacturing. This obviates the specifically stated purpose of Applicant's invention, as well as the reason for preforming the coil (as required by Applicant's claim 1 and the Adachi reference) in the first instance. *See* page 13, line 15 - page 16, line 8 of applicant's specification. One skilled in the art would not look to Glennon in view of Adachi to teach end-turns/coil-ends with no axial gap in a preformed stator winding. Even if one of skill in the art were to attempt Examiner's proposed combination, they would not be successful, as clearly previously explained by Applicant. While preformed coils in and of themselves, as well as individually wound coils with no gaps when assembled to a stator, might be argued to be known in the art, preformed coils without gaps, as claimed in Applicant's claim 1 are not known. Prior to Applicant's invention, preformed stator coils could not be assembled to stator cores without gaps therebetween, or without damage to the coils. *See* page 5, lines 11-33 of Applicant's specification. Therefore, it is not obvious that one skilled in the art would modify Adachi according to Glennon as proposed by the Examiner, because Glennon teaches away from Adachi as well as Applicant's claimed invention, in that Glennon teaches a winding assembled/connected after insertion into a core.

The Examiner has failed to establish a *prima facie* case of obviousness. The Examiner, at most, seems to make out an argument that it would have been "obvious to try" to make the proposed Adachi-Glennon combination and to modify the Adachi by "shortening the stator assembly by bringing the end-turns of the coil into contact with the stator core," such that the proposed Adachi-Glennon combination teaches "one of ordinary skill in the art to form a preformed coil such that the gaps provided between the axially arranged elements was minimized."

REQUEST FOR RECONSIDERATION
U.S. Appln. No. 09/277,198

While the Applicant submits this is not the case, nonetheless, the Examiner's position amounts to an impermissible "obvious to try" rejection. In short, the Examiner seems to be asserting that it would have been obvious to attempt to shorten Adachi's coil-ends to form a coil as recited in Applicant's claims. Both In re O'Farrell, 853 F2d 894, 7 USPQ2d 1673 (Fed. Cir. 1998), and In re Geiger, 815 F2d 686, 2 USPQ2d 1276 (Fed. Cir. 1987) address this impermissible "obvious to try" standard. "Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching, suggestion or incentive supporting the combination." Geiger, 815 F2d at 687. A claimed invention is not rendered obvious, where the prior art fails to teach an overlapping range, a critical parameter, or to suggest a direction of experimentation, by the mere fact that the prior art discloses the parameter. O'Farrell, 853 F2d 894, 897. In the present case, the prior art does not even teach "a pre-formed coil such that the gaps provided between the axially arranged elements was minimized," as asserted by the Examiner and explained above. In fact Glennon teaches away from a preformed coil, as previously discussed. Thus, Applicants' claimed invention would not have been obvious to one of skill in the art.

With respect to claim 2, this claim is dependent upon non-obvious independent claim 1 and is patentable at least for the reasons set out above. Additionally, as set out in Applicant's December 12, 2000 Amendment, it is clearly recited in Applicant's claim 2 that longitudinally (radially) disposed teeth of a stator core are provided with grooves in the end surfaces thereof which are perpendicular to a band portion of the stator core (parallel with the direction of the teeth), and recessed portions on both sides of the teeth near the ends so that circumferentially

REQUEST FOR RECONSIDERATION
U.S. Appln. No. 09/277,198

projecting portions are formed. Adachi does not teach, disclose or suggest this or any similar structure. Adachi merely discloses circumferentially projecting portions on the end of its teeth. It does not disclose grooves or recesses in a pre-finished stator core which form these portions in a finished stator core. Adachi discloses no similar structure. Furthermore, when a preformed stator coil is assembled to Adachi's stator core, the stator coil will be damaged unless a significant amount of coil-end space is allowed (*see* page 5, line 26-33 of Applicant's specification). This again teaches away from both Applicant's claimed invention, the Glennon reference (which the Examiner asserts teaches no such gaps) and the Examiner proposed Adachi-Glennon combination. Similarly, Glennon discloses a magnetizable body 12 (stator) enclosed by a seal (90, 91) having slots 50 in which conductors 52 are assembled. No preformed stator coil, or pre-finished stator core with grooves or recesses is disclosed. Therefore, claim 2 is not rendered obvious by the Adachi-Glennon combination.

With respect to claims 3 and 4, these claims depend upon non-obvious claims 1 and 2, and are patentable at least for the reasons set out above. Further, Adachi in combination with Glennon does not disclose that a preformed stator coil has a flat planar shape. Thus, claims 3 and 4 cannot be rendered obvious by the Adachi-Glennon combination.

Therefore, Applicant respectfully submits that it is far from obvious that Adachi could be modified in view of Glennon to achieve Applicant's invention of claims 1-4. It is clear that the disclosure of Adachi and Glennon, individually or in combination, do not teach the Applicant's claimed invention. In fact as set out above, Glennon teaches away from both Adachi and Applicant's invention of claims 1-4. More specifically, an artisan of ordinary skill would not

REQUEST FOR RECONSIDERATION
U.S. Appln. No. 09/277,198

have and could not have applied the references in the manner suggested by the Examiner to produce the subject matter of the claimed invention, because of the clear differences between the cited references and Applicant's claimed invention. In view of these differences, it is respectfully submitted that the cited reference does not establish a *prima facie* case of obviousness against Applicant's claims, as one of ordinary skill in the art would have had to add to these references additional features which are neither described nor suggested by the cited references.

The Examiner asserts that the Applicant has considered/attacked the Adachi and Glennon references individually. Applicant respectfully submits that the Examiner is mistaken. While Applicant does explain the shortcomings of each individual reference in this Amendment and Applicant's Amendment of December 12, 2000, Applicant clearly also explains how these references are not properly combinable. *See* above, and page 4, paragraph 1 of Applicant's December 12, 2000 Amendment.

The Examiner has also misconstrued *In re Keller*. *Keller*, discusses combination of analogous art references. Applicant has not argued that the art is non-analogous, Applicant has argued that the references can not be combined because they teach away from one another and especially Applicant's claimed invention. *See Tec Air Inc. v. Denso Manufacturing Michigan Inc.*, 192 F.3d 1353, 52 USPQ2d 1294 (Fed. Cir. 1999).

Since the Adachi and Glennon references clearly teach away from one another as set out above, they are not properly combinable. The motivation asserted by the Examiner to combine these references, that the "suggestion of Glennon is clearly to reduce the axial length of the stator

REQUEST FOR RECONSIDERATION
U.S. Appl. No. 09/277,198

by minimizing end turns, which in combined with Adachi suggests prewound coils in contact with the end of the stator to reduce axial length of the alternator,” is in fact contradicted by the explicit teachings of the references themselves, which teach away from making such a combination. Such a combination/modification of the references, as asserted by the Examiner, will destroy the intent, purpose and/or function of the particular invention disclosed in each reference, as set out in Applicant’s December 12, 2000 Amendment. Thus creating a disincentive rather than a motivation to combine/modify the references. In re Gordon, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984). References must be considered for their teachings as a whole. See Graham v. John Deere Co., 383 U.S. 1, 17-18, 148 USPQ 459, 467 (1966) (§103 requires consideration, *inter alia*, of differences between prior art and claimed invention as a whole).

Furthermore, as discussed above, the cited references actually teach away from one another and Applicant’s invention. Thus, one of ordinary skill at the time of Applicant’s conception of the present invention would not have even attempted to combine/modify the references as asserted by the Examiner to accomplish Applicant’s claimed invention. Essentially, teaching away is a *per se* demonstration of a lack of a *prima facie* case of obviousness. In re Dow Chemical Co., 837 F.2d 469, 5 USPQ2d 1529 (Fed. Cir. 1988); In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988). Thus, the Examiner has not made out a *prima facie* case of obviousness by attempting to combine the cited references.

In order to combine or modify reference(s), and establish a *prima facie* case of obviousness, the Examiner must show by clear and particular evidence the motivation,

REQUEST FOR RECONSIDERATION
U.S. Appln. No. 09/277,198

suggestion or teaching to combine or modify the reference(s) and how or why such modification or combination is within the skill of one in the art. *See, In re Dembiczak*, 50 USPQ2d 1614 (Fed.Cir. 1999). Even where all the elements of an invention are taught in the prior art references or known in the art, which in this case they are not, the Examiner cannot merely combine or modify these disclosed elements. The Examiner cannot rely on what he/she presumes is the level of knowledge of one of ordinary skill in the art at the time of the invention to supply the missing modifications, “skill in the art does not act as a bridge over gaps in substantive presentation of an obviousness case.” Al-cite Corp. v. VSI International, Inc., 50 USPQ2d 1161, 1171 (Fed.Cir. 1999). Just because one skilled in the art may have had the capability of assembling the invention is not sufficient to establish a *prima facie* case of obviousness. The Examiner must “show reasons that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would select the elements from the cited prior art references for a combination in the manner claimed.” In re Rouffet, 47 USPQ2d 1453 (Fed.Cir. 1998). The mere fact that references can be “combined or modified does not render the resultant combination [or modification] obvious unless the prior art also suggests the desirability of the combination [or modification].” In re Mills, 916 F.2d 680, 16 USPQ2d 1430 (Fed.Cir. 1990); MPEP §2143.01. Accordingly, Applicant respectfully requests the Examiner to withdraw the rejection of all claims based upon 35 U.S.C. § 103(a).

Therefore, it is submitted that Adachi in combination with Glennon does not form a sufficient basis for rejection of Applicant’s claims 1-4 under 35 U.S.C. § 103, and

REQUEST FOR RECONSIDERATION
U.S. Appln. No. 09/277,198

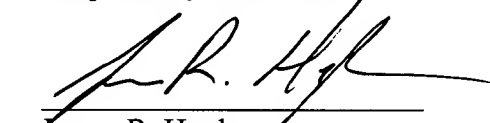
reconsideration and withdraw of the rejections under 35 U.S.C. § 103(a) is respectfully requested.

Conclusion

In view of the foregoing, the claims are now believed to be in form for allowance, and such action is hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, he is kindly requested to contact the undersigned at the telephone number listed below.

Applicant hereby petitions for any extension of time which may be required to maintain the pendency of this case, and any required fee, except for the Issue Fee, for such extension is to be charged to Deposit Account No. 19-4880.

Respectfully submitted,


James R. Hughes
Registration No. 45,657

SUGHRUE, MION, ZINN,
MACPEAK & SEAS, PLLC
2100 Pennsylvania Avenue, N.W.
Washington, D.C. 20037-3213
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

Date: July 6, 2001